



JEUR1006FPL EPI ULTRAFAST SOFT RECOVERY RECTIFIER

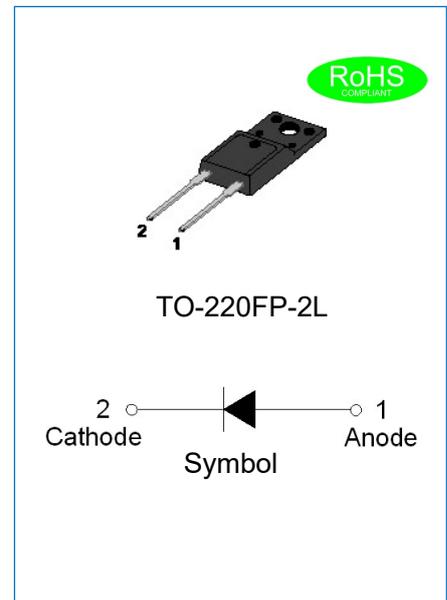
Rev.2.1

DESCRIPTION

- ✧ Plastic package has underwriters laboratory flammability classification 94V-0
- ✧ Lead free in comply with EU RoHS 2011/65/EU directives
- ✧ Low reverse leakage current
- ✧ Ultrafast recovery time and soft recovery characteristics
- ✧ Low recovery loss
- ✧ Applications for discontinuous current mode (DCM) power factor correction (PFC), high frequency switched-mode power supplies

MECHANICAL DATA

- ✧ Case: TO-220FP-2L molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Weight:2gram



ABSOLUTE MAXIMUM RATING (Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	JEUR1006FPL	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	600	V
Maximum RMS voltage	V_{RMS}	420	V
Maximum DC blocking voltage	V_{DC}	600	V
Average forward current at $T_C=80^\circ\text{C}$	$I_{F(AV)}$	10	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	132	A
Peak forward surge current: 10ms single half sine-wave superimposed on rated load		120	
Junction temperature and storage temperature range	T_j, T_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Min.	Typ.	Max.	Unit	
Forward voltage@ $I_F=10\text{A}$	V_F	-	$T_j=25^\circ\text{C}$	1.25	1.5	V
			$T_j=150^\circ\text{C}$	1.0	1.3	
DC reverse current at rated DC blocking voltage	I_R	-	$T_j=25^\circ\text{C}$	-	5	μA
			$T_j=150^\circ\text{C}$	-	200	
Reverse recovery time	t_{rr}	-	-	50	ns	

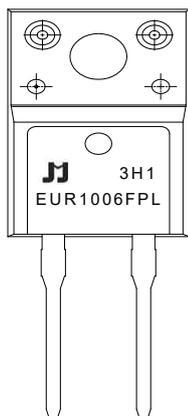
ISOLATION CHARACTERISTICS

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
$V_{isol(RMS)}$	RMS isolation voltage	50Hz≤f≤60Hz,RH≤65%, from all pins to external heatsink, sinusoidal waveform, clean and dust free	-	-	2500	V
C_{isol}	Isolation capacitance	from cathode to external heatsink	-	10	-	pF

THERMAL RESISTANCES

Symbol	Parameter	Min.	Typ.	Max.	Unit
$R_{th(j-c)}$	Thermal resistance from junction to case	-	4	-	°C/W

MARKING



EUR	EPI Ultrafast Recovery Rectifier
10	$I_{F(AV)}=10A$
06	$V_{RRM}:600V$
FPL	Package:TO-220FP-2L

$xH1$: Month, 1/2/3~9/A/B/C

$3x1$:

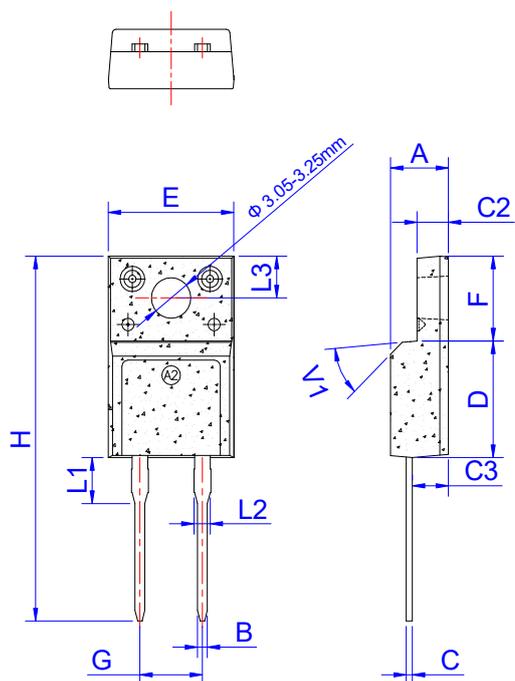
2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

$3Hx$: Batch number

ORDERING INFORMATION

<p>J</p> <p>JieJie Microelectronics</p>	<p>E</p> <p>Epi</p> <p>Ultra fast</p>	<p>U</p> <p>Ultra fast</p>	<p>R</p> <p>Rectifier</p>	<p>10</p> <p>$I_{F(AV)}=10A$</p>	<p>06</p> <p>$V_{RRM}:600V$</p>	<p>FPL</p> <p>Package: TO-220FP-2L</p>
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PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.50		4.90	0.177		0.193
B	0.74	0.80	0.83	0.029	0.031	0.033
C	0.47		0.65	0.019		0.026
C2	2.45		2.75	0.096		0.108
C3	2.60		3.00	0.102		0.118
D	8.80		9.30	0.346		0.366
E	9.80		10.4	0.386		0.410
F	6.40		6.80	0.252		0.268
G		5.08			0.200	
H	28.0		29.8	1.102		1.173
L1		3.63			0.143	
L2	1.14		1.70	0.045		0.067
L3		3.30			0.130	
V1		45°			45°	

PACKAGE INFORMATION-TO-220FP-2L

OUTLINE	UNIT WEIGHT (g/PCS) TYP	TUBE (PCS)	PER CARTON (PCS)
TUBE	2	50	5,000

CHARACTERISTICS CURVE

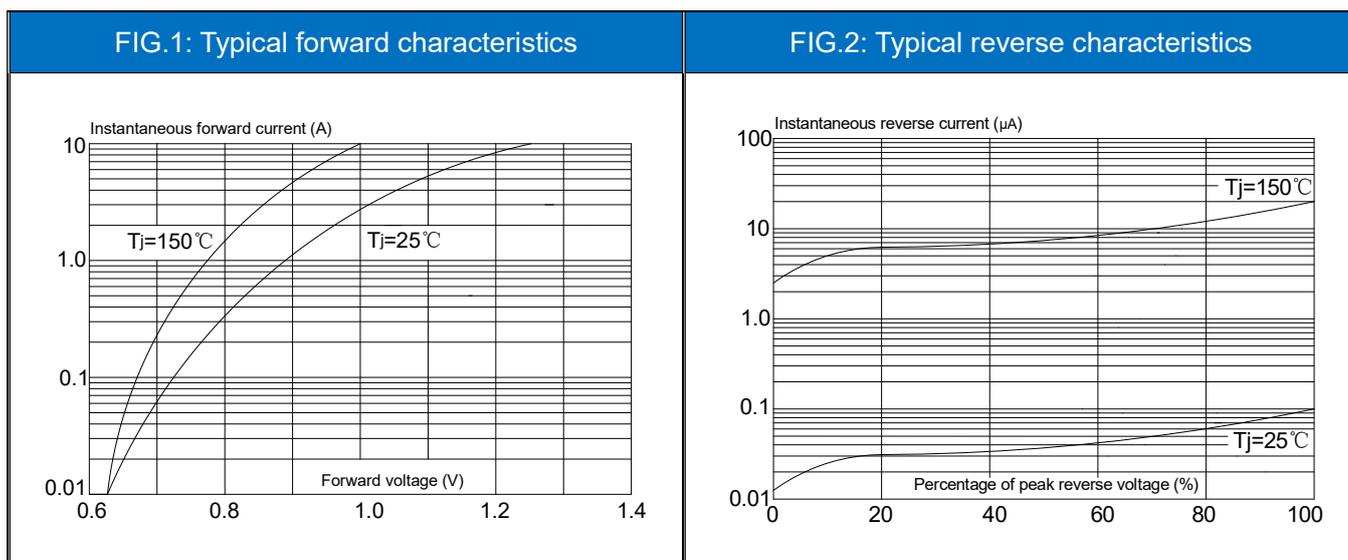


FIG.3: Maximum non-repetitive peak forward surge current(8.3ms single half sine-wave)

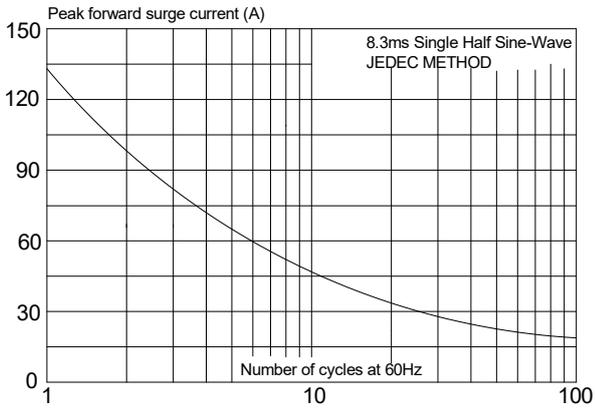


FIG.4: Maximum non-repetitive peak forward surge current(10ms single half sine-wave)

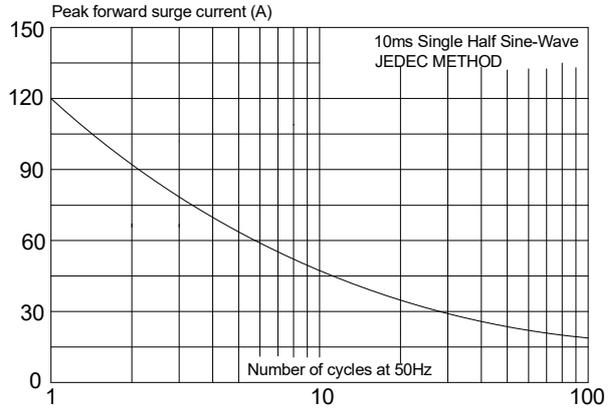


FIG.5: Forward current derating curve

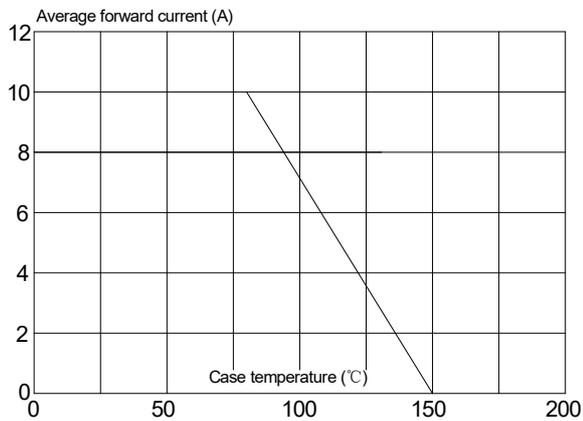
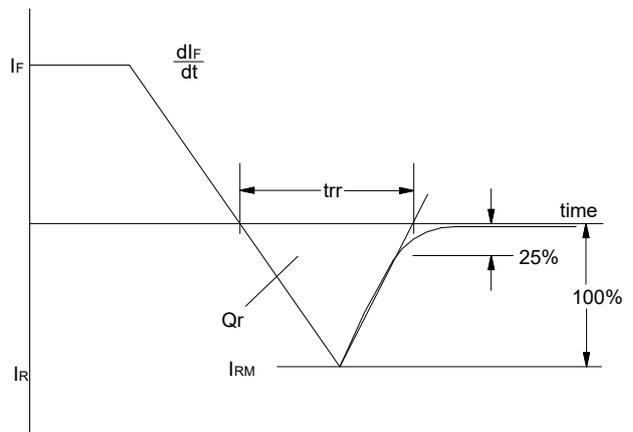


FIG.6: Reverse recovery definitions



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